

an establishing unit [for establishing] configured to establish a first communication channel in the second physical network for transmitting the information data from the transmitting node;

a reserving unit [for reserving] configured to reserve a second communication [path] channel in the first physical network for transferring the information data transmitted through [said] the first communication channel to another data transfer control device [belonging] connected to the first physical network and/or the receiving node; and

b1 a commanding unit [for commanding] configured to command the transmitting node to transmit the information data through [said] the first communication channel, by using a protocol [depending on] of the second physical network.

2. (Amended) The device of claim 1, wherein the [receiving] reserving unit transmits a control message commanding a network connection device which connects the second physical network and a third physical network, to register a correspondence between the first communication channel in the second physical network and a header/channel information depending on the third physical network.

4. (Amended) The device of claim 3, further comprising:
an interface unit [for connecting] configured to connect the data transfer control device to a third physical network or the first physical network; and
a transmission unit [for transmitting] configured to transmit the information data received through [said] the first communication channel in the second physical network to the third physical network or the first physical network, onto a channel indicated by said control message, or after attaching the header information contained in said control message.

5. (Amended) The device of claim 3, further comprising:

an interface unit [for connecting] configured to connect the data transfer control device to a third physical network or the first physical network;

a conversion unit [for converting] configured to convert a data format of data received through [said] the first communication channel, from a first data format depending on the second physical network to a second data format depending on the third physical network or the first physical network and/or an upper logical network of the third physical network or the first physical network; and

a transmission unit [for transmitting] configured to transmit said data with the data format converted by the conversion unit as the information data to the third physical network or the first physical network, onto a channel indicated by said control message, or after attaching the header information contained in said control message.

6. (Amended) The device of claim 3, further comprising:

an encoding/decoding unit [for encoding/decoding] configured to encode/decode data received through [said] the first communication channel; and

a transmission unit [for transmitting] configured to transmit the information data encoded/decoded by the encoding/decoding unit, to a channel indicated by said control message, or after attaching a header information contained in said control message.

7. (Amended) The device of claim 1, wherein the establishing unit establishes [said] the first communication channel in a form of a broadcast type channel.

8. (Amended) The device of claim 1, wherein the reserving unit communicates an information regarding a communication resource required for the second communication [path] channel, with said another data transfer control device and/or the receiving node.

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9. (Amended) The device of claim 1, further comprising:
a collecting unit [for collecting] configured to collect attribute information of
transmitting and/or receiving nodes connected with the second physical network; and
a notifying unit [for notifying] configured to notify said attribute information to said
another data transfer control device and/or the receiving node.

10. (Amended) The device of claim 1, further comprising:
a receiving unit [for receiving] configured to receive a notice regarding attribute
information of transmitting and/or receiving nodes connected with the first physical network;
and
a memory unit [for storing] configured to store said attribute information.

11. (Amended) The device of claim 1, further comprising:
a receiving unit [for receiving] configured to receive a control message containing an
information capable of specifying the transmitting node, from said another data transfer
control device and/or the receiving node;
wherein the commanding unit commands a transmission of the information data to the
transmitting node which is specified by said control message.

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40. (Amended) A method for controlling transfer of information data to a receiving
node connected with a first physical network from a transmitting node connected with a
second physical network, at one data transfer control device connected with the second
physical network, the method comprising the steps of:

(a) establishing a first communication channel in the second physical network for
transmitting the information data from the transmitting node;

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(b) reserving a second communication [path] channel in the first physical network for transferring the information data transmitted through [said] the first communication channel to another data transfer control device [belonging] connected to the first physical network and/or the receiving node; and

(c) commanding the transmitting node to transmit the information data through [said] the first communication channel, by using a protocol [depending on] of the second physical network.

41. (Amended) The method of claim 40, wherein the step (b) transmits a control message commanding a network connection device which connects the second physical network and a third physical network, to register a correspondence between the first communication channel in the second physical network and a header/channel information depending on the third physical network.

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43. (Amended) The method of claim 42, further comprising the step of:
(d) connecting said one data transfer control device to a third physical network or the first physical network; and
(e) transmitting the information data received through [said] the first communication channel in the second physical network to the third physical network or the first physical network, onto a channel indicated by said control message, or after attaching the header information contained in said control message.

44. (Amended) The method of claim 42, further comprising the step of:
(d) connecting said one data transfer control device to a third physical network or the first physical network; and

(e) converting a data format of data received through [said] the first communication channel, from a first data format depending on the second physical network to a second data format depending on the third physical network or the first physical network and/or an upper logical network of the third physical network or the first physical network; and

(f) transmitting said data with the data format converted by the step (d) as the information data to the third physical network or the first physical network, onto a channel indicated by said control message, or after attaching the header information contained in said control message.

45. (Amended) The method of claim 42, further comprising the steps of:

(d) encoding/decoding data received through [said] the first communication channel; and
(e) transmitting said data encoded/decoded by the step (d) as the information data, to a channel indicated by said control message, or after attaching a header information contained in said control message.

46. (Amended) The method of claim 40, wherein the step (a) establishes [said] the first communication channel in a form of a broadcast type channel.

47. (Amended) The method of claim 40, wherein the step (b) communicates an information regarding a communication resource required for the second communication [path] channel, with said another data transfer control device and/or the receiving node.--

Please add new Claims 91 and 92 as follows:

--91. The device of claim 1, wherein when the information data from the transmitting node is requested to be transmitted to the receiving node via the another data transfer control device,

the another data transfer control device instructs the data transfer control device to transmit the information data from the transmitting node to the receiving node,

the data transfer control device communicates with the transmitting node via the protocol of the second physical network and establishes the first communication channel between the transmitting node and a network control device,

the network control device establishes the second communication channel between the network control device and the receiving node, and

the another data control device instructs the receiving node to receive the information data transmitted through the second communication channel using a protocol of the first physical network.

66 92. The method of claim 40, wherein when the information data from the transmitting node is requested to be transmitted to the receiving node via the another data transfer control device,

the another data transfer control device instructs the data transfer control device to transmit the information data from the transmitting node to the receiving node,

the data transfer control device communicates with the transmitting node via the protocol of the second physical network and establishes the first communication channel between the transmitting node and a network control device,

the network control device establishes the second communication channel between the network control device and the receiving node, and

the another data control device instructs the receiving node to receive the information data transmitted through the second communication channel using a protocol of the first physical network.--